

8. The method of claim 4, wherein removing contaminants from the used oil comprises distilling the used oil at a temperature of about 275°C to about 300°C and a pressure of about 0.05 torr to about 0.2 torr.
9. The method of claim 4, wherein removing contaminants from the used oil comprises distilling the used oil at a temperature of about 200°C to about 300°C and a pressure of about 0.05 torr to about 200 torr.
11. The method of claim 4, wherein the base compound is an inorganic or organic base compound.
12. The method of claim 11, wherein the inorganic base compound is selected from the group consisting of sodium hydroxide, potassium hydroxide, and combinations thereof.
13. The method of claim 4, wherein a mixture of the used oil and phase transfer catalyst comprises about 1% to about 10% by weight of the phase transfer catalyst.
14. (Cancelled without prejudice) The method of claim 4, wherein a mixture of the used oil and base compound comprises about 1 % to about 10 % by weight of the base compound in volume of solution.
- 15 (Cancelled without prejudice) The method of claim 4, wherein a mixture of the used oil and base compound comprises about 0.5 % to about 5 % by weight of the base compound in volume of solution.
16. The method of claim 4, wherein the used oil comprises motor oil.
17. A method for removing contaminants from a petroleum distillate, comprising:
mixing the distillate with ethylene glycol in the presence of a base compound;
and

removing the contaminants from the distillate using means for distillation.

18. The method of claim 17, wherein the petroleum distillate comprises motor oil.
19. The method of claim 17, wherein removing contaminants from the distillate comprises distilling the distillate at a temperature of about 200°C to about 275°C and a pressure of about 100 torr to about 200 torr.
20. The method of claim 17, wherein removing contaminants from the distillate comprises distilling the distillate at a temperature of about 275°C to about 300°C and a pressure of about 0.05 torr to about 0.2 torr.
21. The method of claim 17, wherein removing contaminants from the distillate comprises distilling the distillate at a temperature of about 200°C to about 300°C and a pressure of about 0.05 torr to about 200 torr.
22. The method of claim 17, wherein a mixture of the distillate and ethylene glycol comprises about 1% to about 10 % by weight of ethylene glycol.
23. (Cancelled without prejudice) The method of claim 17, wherein a mixture of the distillate, ethylene glycol and base compound comprises about 1 % to about 10 % by weight of the base compound in volume of solution.
- 24 (Cancelled without prejudice) The method of claim 23, wherein a mixture of the distillate and base compound comprises about 0.5 % to about 5 % by weight of the base compound in volume of solution.

25. A method for removing contaminants from motor oil, comprising:
mixing the motor oil with ethylene glycol in the presence of a base compound;
and then
distilling the motor oil at a temperature of about 200°C to about 300°C and a
pressure of about 0.05 torr to about 200 torr.
26. The method of claim 25, wherein the base compound comprises an inorganic
compound.
27. The method of claim 26, wherein the inorganic base compound is selected from
the group consisting of sodium hydroxide, potassium hydroxide, and combinations
thereof.
28. The method of claim 25, wherein a mixture of the motor oil and ethylene glycol
comprises about 1 to about 10 % by weight of the ethylene glycol.
29. (Cancelled without prejudice) The method of claim 25, wherein a mixture of
the motor oil and base compound comprises about 1 % to about 10 % by weight of the
base compound in volume of solution.
30. (Cancelled without prejudice) The method of claim 25, wherein a mixture of
the motor oil and base compound comprises about 0.5 % to about 5 % by weight of the
base compound in volume of solution.
31. (Amended) A method for removing contaminants from motor oil, comprising:
mixing the motor oil with an inorganic base compound;
mixing the motor oil with a phase transfer catalyst in the presence of the
inorganic base compound, wherein the phase transfer catalyst comprises a glycol; and
then
distilling the motor oil at a temperature of about 200°C to about 275°C and a
pressure of about 100 torr to about 200 torr.

32. The method of claim 31, wherein the inorganic base compound is selected from the group consisting of sodium hydroxide, potassium hydroxide, and combinations thereof.

33. (Cancelled without prejudice) The method of claim 31, wherein the phase transfer catalyst comprises quaternary ammonium salts, polyol ethers, glycols, or crown ethers.

34. The method of claim 31, wherein the phase transfer catalyst comprises ethylene glycol.

35. The method of claim 31, further comprising distilling the motor oil at a temperature of about 275°C to about 300°C and a pressure of about 0.05 torr to about 0.2 torr.

36. The method of claim 31, wherein a mixture of the motor oil and phase transfer catalyst comprises about 1 to about 10 % by weight of the phase transfer catalyst.

37. (Cancelled without prejudice) The method of claim 31, wherein a mixture of the motor oil and inorganic base compound comprises about 1 % to about 10 % by weight of the inorganic base compound in volume of solution.

38. (Cancelled without prejudice) The method of claim 31, wherein a mixture of the motor oil and base compound comprises about 0.5 % to about 5 % by weight of the base compound in volume of solution.

Please add the following new claims 39-42:

39. (New) The method of claim 11, wherein a concentration of the base compound in the used oil is between 0.5 and 5 weight percent on a dry weight basis.

40. (New) The method of claim 17, wherein a concentration of the base compound in the distillate is between 0.5 and 5 weight percent on a dry weight basis.
41. (New) The method of claim 26, wherein a concentration of the base compound in the motor oil is between 0.5 and 5 weight percent on a dry weight basis.
42. (New) The method of claim 32, wherein a concentration of the base compound in the motor oil is between 0.5 and 5 weight percent on a dry weight basis.

REMARKS

This is intended as a full and complete response to the Final Office Action dated January 13, 2003, having a shortened statutory period for response extended one month to expire on May 13, 2003. Claims 4-9 and 11-38 are pending in the application and stand rejected. Applicants have cancelled claims 5, 14-15, 23-24, 29-30, 33, and 37-38 without prejudice and have amended base claims 4 and 31 and added new claims 39-42 to more clearly recite aspects of the invention. Please reconsider the claims pending in the application for reasons discussed below.

Enclosed herewith is a copy of the PTO form 1449 corresponding to the IDS filed on February 20, 2001. Applicants wish to note that a copy of the same PTO form 1449 was previously submitted in the Applicants' last response to office action mailed on October 30, 2002. The Examiner apparently did not receive this copy of the PTO form 1449, and Applicants apologize for any inconvenience.

Claims 4-9 and 11-38 stand rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-11 of U.S. Patent No. 6,238,551; over claims 1-3 of U.S. Patent No. 6,179,999; and over claims 1-14 of U.S. Patent No. 6,319,394. Applicants have enclosed herewith a terminal disclaimer to obviate the rejection and have authorized the fee of \$55 (small entity) under 37 CFR 1.321(c). Applicants submit that a single disclaimer fee is all that is